Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

20982

Accredited to ISO/IEC 17025:2017

Peak NDT Ltd

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Calibration performed at the above address only

Calibration and Measurement Capability (CMC)

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks
Measurement and sourcing capabilities listed below follow the method of direct comparison against laboratory references or established ratio technique unless otherwise stated in the Remarks column.			
ULTRASONIC FLAW DETECTION EQUIPMENT As per BS EN ISO 22232-1:2020 Characterization and **verification of ultrasonic test equipment** calibration of equipment required for group 2 tests for Peak NDT ultrasonic equipment. The initials FSH and FSW used in the standard and here refer to Full Screen Height and Full Screen Width, respectively.			
Pulser voltage	15 V to 500 V	4.6 %	
Pulse risetime	10 V to 450 V	3.6 ns	
Pulse duration	1 ns to 600 ns	0.50 % + 1.6 ns	
Amplifier frequency response	100 kHz to 30 MHz	4.0 % of value at 3 dB point	
Equivalent input noise	Method B	3.5 %	Using Method B as described in Section 9.4.3.3 of BS EN ISO 22232-1:2020. Will be expressed as nV / √Hz
Accuracy of attenuator reference to a nominal *1 V at f0*	Fixed 3dB point 0 dB to 65 dB 65 dB to 100 dB	0.025 dB 0.50 dB 1.0 dB	
Gain Linearity	0 dB to 70 dB 100 kHz to 30 MHz	1.5 % of FSH	
Vertical display linearity	Of screen height	1.5 % of FSH	
Resistance	50 Ω 40 Ω to 5 kΩ	390 mΩ 0.75 %	
END			

Appendix - Calibration and Measurement Capabilities

Introduction

The definitive statement of the accreditation status of a calibration laboratory is the Accreditation Certificate and the associated Schedule of Accreditation. This Schedule of Accreditation is a critical document, as it defines the measurement capabilities, ranges and boundaries of the calibration activities for which the organisation holds accreditation.

Calibration and Measurement Capabilities (CMCs)

The capabilities provided by accredited calibration laboratories are described by the Calibration and Measurement Capability (CMC), which expresses the lowest measurement uncertainty that can be achieved during a calibration. If a particular device under calibration itself contributes significantly to the uncertainty (for example, if it has limited resolution or exhibits significant non-repeatability) then the uncertainty quoted on a calibration certificate will be increased to account for such factors.

The CMC is normally used to describe the uncertainty that appears in an accredited calibration laboratory's schedule of accreditation and is the uncertainty for which the laboratory has been accredited using the procedure that was the subject of assessment. The measurement uncertainty is calculated according to the procedures given in the GUM and is normally stated as an expanded uncertainty at a coverage probability of 95 %, which usually requires the use of a coverage factor of $k = 2$. An accredited laboratory is not permitted to quote an uncertainty that is smaller than the published measurement uncertainty in certificates issued under its accreditation.

Expression of CMCs - symbols and units

It should be noted that the percentage symbol (%) represents the number 0.01. In cases where the measurement uncertainty is stated as a percentage, this is to be interpreted as meaning percentage of the measurand.
Thus, for example, a measurement uncertainty of 1.5 % means $1.5 \times 0.01 \times q$, where q is the quantity value.

The notation Q[a, b] stands for the root-sum-square of the terms between brackets: $Q[a, b] = [a^2 + b^2]^{1/2}$